

Linking Watershed and Coastal Management with Water Safety In Guyana



*Drinking Water Distributed by Trucks to Temporary
Water Storage Tanks in Post-Flood Guyana (PAHO)*

Background: Nearly 1.2 billion people worldwide do not have access to safe drinking water, and approximately 2 million children die every year from water-related diseases. In Guyana, 17% of the population does not have access to an improved drinking water source, while 30% do not have access to adequate sanitation facilities. Clean drinking water access becomes more difficult when land-based sources of pollution are introduced. Water distribution system infrastructure and drinking water quality were primary concerns after the massive floods of January 2005 that affected more than half the population. Natural disasters and human activities both pose significant challenges to a watershed system, directly affecting drinking water quality.

Land-based activities are the main source of marine pollution in Guyana, affecting the coastal environment, including estuaries and inshore coastal waters. Pollution of water sources and associated alterations of coastal ecosystems are threatening the sustainability of coastal populations, which

depend largely upon the maintenance of healthy coastal ecosystems. Throughout Guyana and the rest of the Caribbean Region, much of the human population lives in close proximity to the coast. In both urban centers and subsistence communities, improving the safety of water sources and the management of watersheds is vital to economic development, adequate nutrition, and public health.

A Combined National Program of Action and Water Safety Plan for Guyana:

The U.S. Centers for Disease Control and Prevention (CDC) has joined with the U.S. National Oceanic and Atmospheric Administration (NOAA), the Pan American Health Organization (PAHO), and the Caribbean Environmental Health Institute (CEHI) to promote and implement a complementary program for a National Program of Action (NPA) and the World Health Organization's Water Safety Plan (WSP) methodology, in collaboration with Guyanese government authorities for the environment. A NPA is a management tool that is designed to prevent, reduce, control and/or eliminate marine degradation from land-based activities. A NPA promotes an integrated watershed and coastal management approach built on existing National Development Plans. A NPA addresses nine pollutant categories: Nutrients, Sediment Mobilization, Physical Alteration / Destruction of Habitats, Sewage, Persistent Organic Pollutants, Radioactive Substances, Heavy Metals, Oils (Hydrocarbons), and Litter.

A WSP is a comprehensive approach to assuring drinking water safety that relies on environment and health sector collaboration to identify, assess, monitor, and manage risks inherent in a water delivery system from 'catchment to consumer.' The key components include a supply system assessment, effective operational monitoring, and management.

WSPs use a systematic preventive approach rather than a reactive approach to problem-solving by identifying all points in the drinking water system where contamination could compromise the water reaching consumers. The combined NPA/WSP strategy will result in an integrated water protection strategy to address land-based sources of pollution, and water safety as well as public health.



*Palm Trees on a Low Coastal Plain Near the Atlantic
Ocean in the 'Land of Many Waters' (Guyana News and
Information)*

An Integrated Water Safety Plan and National Program of Action for the Protection of the Marine Environment from Land-Based Sources of Pollution in Guyana (Planned)

August 2006

Partner Organizations:

In Guyana, the Ministries of Health, Housing and Water, and Marine Resources will be involved. They will work in conjunction with the Guyana Environmental Protection Agency and regional technical agencies:

CEHI is dedicated to finding cost effective solutions to environmental health problems in its 16 member states, one of which is Guyana. CEHI collaborates with national, regional, and international organizations to provide leadership to its member states in making effective environmental health policy decisions.

NOAA is dedicated to understanding and predicting changes in the Earth's environment and to conserving and managing coastal and marine resources to meet U.S. economic, social, and environmental goals. It works together with the United Nations Environmental Programme's Global Programme of Action for the Protection of the Marine Environment from Land Based Activities (GPA) to support NPA development in the Caribbean.

USGS, the U.S. Geological Survey, provides scientific information to manage water, biological, energy, and mineral resources.

PAHO is the World Health Organization's Regional Office for the Americas. It is dedicated to improving the health and living standards of the countries of the Americas and forms part of the United Nations system.

The CDC is one of the 13 major operating components of the Department of Health and Human Services (HHS), which is the principal U.S. agency dedicated to protecting the health and safety of all Americans.

Current Activities: At present, separate NPA and WSP work is proceeding throughout Latin America and the Caribbean:

- At the national level, Bahamas, Barbados, Costa Rica, Honduras, Mexico, Panama, and Trinidad and Tobago have initiated the NPA process.
- May 2005: Buenos Aires, Argentina WSP Workshop with participation from ten Latin American countries (Argentina, Bolivia, Brazil, Guyana, Haiti, Honduras, Jamaica, Mexico, Nicaragua, and Peru).
- In Jamaica, USEPA, PAHO and CDC are working with government ministries to develop a water safety plan for the municipality of Spanish Town, Jamaica.

Costs and Future Efforts:

The project has an approximate cost of \$250,000 through the end of the WSP/NPA development. The initial phase includes a policy assessment for managing coastal and watershed areas. The second phase involves the development of the combined WSP/NPA pilot projects based on the specific needs of Guyana. This includes the integration of projects into the existing coastal and watershed management political and institutional frameworks, identifying priority issues, and establishing performance measures for project evaluation.

For more information about Water Safety Plans and National Programs of Action, visit <http://www.who.int/wsportal/en/> and <http://international.nos.noaa.gov/gpa> or contact

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